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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,281	03/04/2004	Atsushi Yanai	SNY-054	3138
20374	7590	07/20/2007		
KUBOVCIK & KUBOVCIK SUITE 710 900 17TH STREET NW WASHINGTON, DC 20006				
			EXAMINER HODGE, ROBERT W	
			ART UNIT 1745	PAPER NUMBER
			MAIL DATE 07/20/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/792,281

Applicant(s)

YANAI ET AL.

Examiner

Robert Hodge

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

Response to Arguments

Applicant's arguments filed 6/7/07 have been fully considered but they are not persuasive. Applicants state that the Kotato reference does not teach the recited ranges of the instantly claimed invention and state and admit that the overlapping range that the Examiner cited is disclosed in the Kotato reference but state that it is in the Prior Art section of Kotato. This is not found persuasive because applicants admit that Kotato was well aware that the range for γ -butyrolactone has been used prior to Kotato's invention in a range of 50-95%, which means the knowledge is even older than the Kotato reference. Therefore a skilled artisan would be aware of said range and therefore would be motivated to use said range from Kotato's disclosure alone. Therefore since the ranges from the prior art overlap with the recited ranges in the instant claims, the rejections will be maintained.

The Examiner Acknowledges that claims 2, 3, 6 and 8 are canceled and therefore any rejection on those claims is now moot.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pre-grant Publication No. 2004/0101763 hereinafter Kotato in view of U.S. Patent No. 6,022,518 hereinafter Yamazaki.

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Kotato teaches a lithium (paragraph [0031]) secondary battery (paragraph [0025]) comprising a positive electrode 1, a negative electrode 2 (paragraph [0026]), a carbon material (such as graphite) as an active material (paragraph [0033]), and a non-aqueous electrolyte comprising γ -butyrolactone between 50-95% by volume (paragraphs [0006] and [0047]), vinylene carbonate between 0.01 to 5% by weight and vinyl ethylene carbonate between 0.01-5% by weight, wherein the sum of the solvents constitute 100% by volume or 100% by weight of the non-aqueous electrolyte (paragraph [0051]).

Kotato does not teach the specific properties of carbon material used as the active material.

Yamazaki teaches a carbon material that is substituted for graphite in non-aqueous secondary batteries such as lithium secondary batteries, said carbon material having a Raman spectrum intensity of 0.45 or less, or 0.41 or less (column 4, line 65 – column 5, line 61) and more specifically in table 1 having intensities of 0.39, 0.34, 0.40, 0.40, 0.41 and 0.38 all of which are greater than 0.2.

At the time of the invention it would have been obvious to one having ordinary skill in the art to include a carbon material having a Raman spectrum intensity greater than 0.2 in Kotato as taught by Yamazaki in order to provide a lithium-ion secondary battery that has increased charge and discharge capacities, with ensured low temperature performance to improve the overall life of the battery by reducing the cycle deterioration.

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Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kotato in view of Yamazaki as applied to claim 1 above, and further in view of JP 2001-297794 hereinafter Kotado.

Kotato as modified by Yamazaki does not teach that the amount of γ -butyrolactone is not less than 97% by volume.

Kotado teaches a non-aqueous lithium secondary battery, where it is preferable to provide γ -butyrolactone at an amount of greater than 90% by weight and further teaches the benefits of doing so (paragraphs [0007]-[0024] of the machine translation). At the time of the invention it would have been obvious to one having ordinary skill in the art to include γ -butyrolactone at an amount greater than 90%, 95% and 97% by volume in Kotato as taught by Kotado in order to provide a lithium secondary battery that has a low freezing point and high specific inductive capacity which will ensure increased charge and discharge capacities and improve the overall life of the battery.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Hodge whose telephone number is (571) 272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RWH


JONATHAN CREPEAU
PRIMARY EXAMINER